NON-MAJOR SYSTEMS OT&E

In accordance with Title 10, U.S. Code, Section 139, paragraph (b)(3), the Director, OT&E is the principle senior management official in the DoD responsible to "monitor and review all operational test and evaluation in the Department of Defense." This includes the OT&E on smaller, non-major acquisition systems. Although several non-major systems such as those directly affecting major systems and those specifically directed by Congress are under direct oversight of DOT&E, the OT&E of most non-major systems are controlled by the Service OTAs.

The Service OTAs are responsible for OT&E on hundreds of small programs. Army ATEC is currently working on 122 ACAT III or below and the Navy OPTEVFOR retains 223. Air Force AFOTEC retains 137 ACAT III programs under their cognizance. This is in addition to the numerous ACAT III programs that are managed by the Air Force's Air Combat Command, Air Mobility Command and Air Warfare Center. None of the Service OTAs are adequately funded for this work. With priority often going to the higher profile major acquisitions, the OTAs must balance many competing demands for very scarce resources.

These small programs represent some of the best examples of integrated T&E demonstrating very effective processes to more rapidly field new military equipment. Often these processes are aggressive applications of the Secretary's themes we have urged now for five years--early involvement by the operational testers, combining DT with OT, and combining testing and training. We are using successful examples from smaller programs to encourage the larger major system acquisitions to take advantage of the benefits of these themes.

One example of non-major system OT&E reported this year was the Deployable Power Generation and Distribution System (DPGDS). A description of the T&E conducted by AFOTEC follows.

SYSTEM DESCRIPTION

The DPGDS is the proposed replacement for existing Harvest Falcon/Eagle power generation systems. It is designed to connect to existing elements of the secondary power distribution system to provide electrical power to a 1,100 person bare base camp. The DPGDS is designed to reduce theater airlift sortie requirements for mobile generation by at least 25 percent (key performance parameter). Other system requirements include improvements in overall efficiency, reliability, durability, and maintainability.

TESTING CONCEPT/METHODOLOGY

The QOT&E and subsequent Deficiency Report Verification Tests (DRVT) were conducted at operationally representative conditions at Holloman AFB, New Mexico. Task qualified Air Force and Army personnel set up and operated the system in a variety of real world configurations and scenarios involving billeting, functional area tents, and base utility systems. Operators were tasked to set up, run, and maintain the system over a 30-day QOT&E and two subsequent DRVTs covering another 30 days of operation each.

NOTABLE RESULTS

DPGDS was rated as operationally effective but not suitable. It passed the 25 percent airlift sortie reduction requirement, easily handled large load fluctuations and maintained stable power output in the automatic mode. However, the number of operational mission failures encountered during QOT&E was unacceptable, approximately one every 11 hours. The logistics supportability (including commercial technical manuals) was unacceptable in all areas assessed.

CONTRIBUTION/INFLUENCE QOT&E HAD ON THE PRODUCTION DECISION

DPGDS would have been operationally limited if fielded prior to resolution of the software, hardware, and suitability deficiencies identified during QOT&E. As a result, the system now provides users with greater flexibility, reliability, safety, and life cycle cost reductions.

LESSONS LEARNED/TEST LIMITATIONS

Provide for a more operationally realistic DT&E with greater operational tester and user participation right from the start. If done, many of the identified deficiencies (software, isolation issues, overheat conditions) may have been solved early, eliminating the need for additional testing after QOT&E. Communications between subject matter experts and system requirement developers is essential. During QOT&E, the users (Army and Air Force) identified new requirements not clearly defined in the original requirements documents causing extensive system changes and a year program slip.

The following tables document some of the other non-major systems OT&E activities conducted by the service OTAs. (These tables are limited to those T&E activities reported in FY01 that were intended to support full-rate production decisions.)

AIR FORCE					
SYSTEM NAME	**ACAT**	**TEST DATES**	**EFFECTIVE**	**SUITABLE**	**SURVIVABLE**
Advanced Technology Anti-Gravity Suit	III	9/00-1/01	NO	NO	N/A
Clear Radar Upgrade	III	12/00-1/01	YES	YES	N/A
Defense IEMATS Replacement Command and Control	III	1/ 01	YES	YES	N/A
Deployable Power Generation and Distribution System	III	7/00-8/00	YES	NO	N/A
GPS Enhanced Navigation System, C-141	III	11/99-7/00	YES	YES	N/A
Next Generation Small Loader	III	5/01	YES	Potentially	N/A
T-38 Avionics Upgrade Program	III	6/00-2/01	YES	Potentially	N/A

ARMY					
SYSTEM NAME	**ACAT**	**TEST DATES**	**EFFECTIVE**	**SUITABLE**	**SURVIVABLE**
(CABS) - OH-58D Cockpit Air Bag System	III	6/00-7/00	YES	YES	YES
(CABS) UH-60 DO Cockpit Air Bag System	III	11/00	YES	YES	YES
(AKMS) LUT Automated Key Management System	III	2/00-8/00	NO	NO	Not evaluated
(LRAS3) LUT Long Range Advance Scout Surveillance System	III	8/00	YES	YES	Not considered an issue
(TWS-OMNI) Night vision Thermal systems - Thermal Weapon Sight	III	3/00-4/00	YES with limitations	YES with limitations	YES with limitations
Joint Biological Point Detection System (JBPDS)	III	5/00-6/00	NO	NO	NO
(MOLLE) Modular Lightweight Load-Carrying Equipment	III	8/00-11/00	YES with Limitations	NO	Not evaluated
(CBPS) Chemical Biological Protective Shelter	III	10/00-11/00	Partially	NO	NO
(MDS FOTE) Modular Decontamination System	IV	3/01-4/01	NO	NO	NO
(EPJS PH II) Extraction Parachute Jettison System	III	4/01-7/01	YES	YES	Not considered an issue
(PIAFS) Portable Inductive Artillery Fuze Setter	III	6/00	YES	YES	YES
(CABS) UH-60 DO Cockpit Air Bag System	III	11/00	YES	YES	YES
(LLDR) Lightweight Laser Designator Rangefinder	III	4/01-5/01	YES with shortcomings	NO	Not suitable in NBC environment, suitable in conventional environment
(PG BLK I) Prophet Ground IOTE	III	10/00-12/00	YES in low intensity environments	YES	Partially Survivable
(ARL LUT I) Airborne Reconnaissance Low	III	3/01-4/01	Partially	Marginally	N/A

NAVY					
SYSTEM NAME	ACAT	TEST DATES	EFFECTIVE	SUITABLE	SURVIVABLE
Distributive Explosive Technology Program	III	10/00-11/00	Potentially Not	Potentially Yes	N/A
EX 8 Mod 0 Marine Mammal System	IVT	10/01-11/01	N/A DT Assist	N/A DT Assist	N/A
Non Gasoline Burning Outboard Engine	III	1/99-101	N/A DT Assist	N/A DT Assist	N/A
Acoustic Intercept Receiver	III	10/00-2/01	Potentially Yes	Potentially Yes	N/A
TB-29A BQ Thin Line Towed Array	III	8/00-3/01	Potentially Yes	Potentially Yes	N/A
Computer Aided Dead Reckoning Tracer	IVT	3/01	N/A DT Assist	N/A DT Assist	N/A
Submarine High Data Rate Antenna	IVT	3/01-4/01	Yes	Yes	N/A
Swimmer Transport Device	III	2/01-6/01	Yes	Yes	N/A
EX 8 Mod 0 Marine Mammal System	IVT	5/01-6/01	Yes	Yes	N/A
Submarine External Communications System	None	6/01-8/01	Potentially Yes	Potentially Yes	N/A
Computer Aided Dead Reckoning Tracer	IVT	6/01-8/01	Yes	Yes	N/A
Low Probability Intercept Altimeter	IVT	10/00-12/00	Potentially Not	Potentially Yes	N/A
F-14 Digital Flight Control System	III	7/00-10/00	Yes	Yes	N/A
S-3B Communications Improvement Program	IVT	6/00-12/00	Yes	Yes	N/A
Terrain Awareness and Warning System	IVT	10/00-11/00	Yes	Yes	N/A
Traffic Alert and Collision Avoidance System	IVT	10/00-11/00	Yes	Yes	N/A
Tactical Aircraft Moving Map Capability	III	10/00-1/01	Yes	Yes	N/A
P-3 Command Function Select Software	III	3/01-6/01	Yes	Yes	N/A
Super Barricade System	None	11/00	Potentially Not	Potentially Not	N/A
Joint MILCATCOM Network Integrated Control System	III	11/00	Yes	Yes	N/A
Financial Air Clearance Transportation System	IVT	8/00-11/00	Yes	Yes	N/A
Tactical Environmental Support System/NITES 2000	IVT	2/01-3/ 01	Yes	Yes	N/A
Automated Digital Network System	III	5/01	Yes	Yes	N/A

NAVY Continued					
SYSTEM NAME	**ACAT**	**TEST DATES**	**EFFECTIVE**	**SUITABLE**	**SURVIVABLE**
EP-3 ARIES II Sensor System Improvement Program	IVT	8/01	No	Yes	N/A
Integrated Ship Controls	IVT	4/01-5/01	Potentially Not	Potentially Not	N/A

MARINE CORPS					
SYSTEM NAME	**ACAT**	**TEST DATES**	**EFFECTIVE**	**SUITABLE**	**SURVIVABLE**
Short Range Assault Weapon	III	2/00-6/00	YES	NO	N/A
Medium Tactical Vehicle Replacement (IOT&E I)	II	2/00-6/00	YES	NO	N/A
Thermal Weapon Sight - Medium	III	8/00-9/00	YES	YES	N/A
Anti-Personnel Obstacle Breaching System	IV-T	10/00-11/00	YES	YES	N/A
Mounted Data Automated Communications Terminal	IV-T	10/00	NO	NO	N/A
Medium Tactical Vehicle Replacement (IOT&E II)	II	1/01-3/01	YES	YES	N/A

Notes:

1) MCOTEA and OPTEVFOR do not breakout Survivability for separate treatment. Survivability is addressed as a component of Operational Effectiveness.

2) Operational Effectiveness and Suitability findings above were reflective of the system at the time of test. The system presented for the MS-III full-rate production decision often has changes incorporated as a result of the IOT&E experience.

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